

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) An optical structure comprising:
a substrate having a surface; and
a modified barium titanate thin film deposited on said surface of said substrate,
wherein said substrate comprises Si or SOI with an optical buffer layer and the modified barium titanate comprises barium titanate including 2 to 20 mol% of Zr (BaZrO₃).
2. (Cancelled)
3. (Withdrawn) The structure of claim 1, wherein the stabilized barium titanate comprises barium titanate including 2 to 20 mol% of Hf (BaHfO₃).
4. (Withdrawn) The structure of claim 1, wherein the stabilized barium titanate comprises barium titanate including 2 to 12 mol% potassium niobate (KNbO₃).
5. (Withdrawn) The structure of claim 1, wherein the stabilized barium titanate comprises a barium titanate including 4 to 14 mol% Sn (BaSnO₃).
6. (Cancelled)
7. (Original) The structure of claim 6, wherein said optical buffer layer comprises MgO, YSZ, CeO₂, SiO₂, or a combination thereof.
8. (Currently amended) The structure of claim[[s]] ~~1, 2, 3, 4, or 5~~, further comprising electrodes on a surface of the ~~stabilized~~modified barium titanate thin film, configured to form an electro-optic structure.

9. (Original) A method of forming an optical structure comprising:
providing a substrate having a surface; and
depositing a modified barium titanate thin film on said surface of said substrate,
wherein the modified barium titanate thin film comprises barium titanate including 2 to 20 mol% of Zr (BaZrO₃).
10. (Cancelled)
11. (Withdrawn) The method of claim 9, wherein the stabilized barium titanate comprises barium titanate including 2 to 20 mol% of Hf (BaHfO₃).
12. (Withdrawn) The method of claim 9, wherein the stabilized barium titanate comprises barium titanate including 2 to 12 mol% potassium niobate (KNbO₃).
13. (Withdrawn) The method of claim 9, wherein the stabilized barium titanate comprises a barium titanate including 4 to 14 mol% Sn (BaSnO₃).
14. (Currently amended) The method of claim 9, ~~10, 11, 12, or 13~~ further comprising placing electrodes on a surface of the ~~stabilized~~ modified barium titanate thin film configured to form an electro-optic structure.
15. (Currently amended) The method of claim 9, ~~10, 11, 12, or 13~~, wherein said substrate comprises Si or SOI with an optical buffer layer.
16. (Currently amended) The method of claim ~~[[9]]15~~, wherein said optical buffer layer comprises any of MgO, YSZ, CeO₂, SiO₂, or a combination thereof.